Vendor Agnostic Solutions – Position Paper Presentation

18 June 2025, 10:00-12:00h

entsoe
Reliable Sustainable Connected

Presentation Agenda

Speaker:
Anna Gorczyca-Goraj
PSE

No.	Subject	Period	Duration	Presenter
1.	**Welcome and Introductions** Opening remarks by ENTSO-E Welcome speech	10.00 – 10.15	15 Minutes	Anna-Gorczyca Goraj (ENTSO-E RDIC WG5 Convener) Marco Forteleoni (ENTSO-E RDIC Vice Chair)
2.	**Motivation towards vendor agnosticism** TSO insights	10.15 – 10.30	15 Minutes	Ralf Heisig (RDIC TF VAS Leader)
3.	**Introduction to the Position Paper**	10.30 – 10.40	10 Minutes	Ralf Heisig (TF VAS Leader) Anna-Gorczyca Goraj (ENTSO-E RDIC WG5 Convener)
4.	**Core tenets for the new modular eco-system addressed in the Position Paper**	10.40 – 11.40	60 Minutes	Anna Gorczyca-Goraj (PSE) Morten Småstuen (Statnett) Andreas Rudolph (TenneT) Carsten Strunge (ENDK) Ralf Heisig (50 Hertz)
5.	**Opportunities & Challenges**	11.40 – 11:55	15 Minutes	Ralf Heisig (RDIC TF VAS Leader)
6.	**Closing remarks and invitation to submit Questions** Process going forward	11:55 – 12.00	5 Minutes	Anna-Gorczyca Goraj (ENTSO-E RDIC WG5 Convener)

Presentation Rules

Speaker:
Anna Gorczyca-Goraj
PSE

1. Audio

Speakers will be asked to switch Audio OFF when not talking

Participants are muted during the webinar

2. Participants' Feedback

Participants are informed to

✓ Provide feedback and questions after webinar at **rdi@entsoe.eu**

No hand raised during webinar

No comments in the chat or questions during webinar

3. Recording

This webinar is recorded. **The video and presentation** will be made available to attendees after the webinar

Welcome & Introduction

Anna-Gorczyca Goraj (ENTSO-E RDIC WG5 Convener)

Marco Forteleoni (ENTSO-E RDIC Vice Chair)

TIME: 15 min

Introduction to ENTSO-E

500.000 km of transmission lines

520 million citizens

- ENTSO-E, established in **2009,** represents **40 TSOs from 36 countries**
- Represents TSOs at the European level.
- Helps TSOs implement and monitor common rules and EU legislation.
- Enhances cooperation among members

Security of **power system**

Optimal functioning and development of **electricity markets**

Climate-neutrality by 2050

Introduction to ENTSO-E

- Conducts security of supply and adequacy **analysis**
- Develops and implements **technical rules** (e.g. **Network Codes)**
- Coordinates long-term **grid planning**
- Coordinates **research, development and innovation** activities
- Develops platforms for **data sharing** with market participants

ENTSO-E Committees

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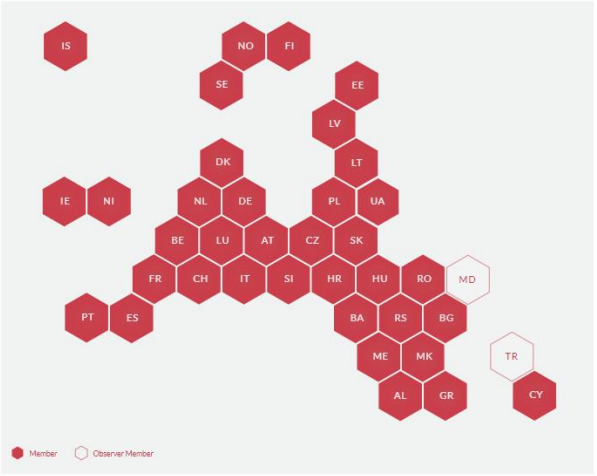


RESEARCH, DEVELOPMENT & INNOVATION COMMITTEE

WORKING GROUPS

- WG1: Assets & Technologies
- WG2: Security & Operations of tomorrow
- WG3: Flexibility & Markets
- WG4: Future of Energy Systems
- WG5: Digital & Communication
- WG RDIP: Research, Development & Innovation Planning

TASK FORCE

- TF DIC: Demonstration & Innovation Coordination
- TF DESAP

ENTSO-E Strategic Roadmap

Pillar 1

Prepare the FUTURE:

A POWER SYSTEM FOR A CARBON NEUTRAL EUROPE

entsoe VISION

Pillar 2

Manage the PRESENT:

A SECURE AND EFFICIENT POWER SYSTEM FOR EUROPE

Operating Future Grids

Deliver secure and efficient operation of the system of systems

Infrastructure & Investments

Accelerate development and grid

Energy System Flexibility

Balance the increased weather dependency & system complexity

Innovation

Enable the necessary developments and uptake of solutions

A SECURE AND EFFICIENT POWER SYSTEM FOR EUROPE

Operational Excellence

Support TSOs for an efficient, resilient and secure system operation

Information & Communication Technology

Design, develop and support ICT tools allowing to manage the power system

Market Development and Operation

Support and implement market mechanisms to efficiently operate the system and optimise social welfare

Regional Coordination

Coordinate national and regional actors at the scale of European regions

15 YEARS OF entsoe ELECTRIFYING EUROPE

Mission 4: Enhance control and interoperability through digitalisation

ENTSO-E RDI Roadmap 2024–2034

CLUSTER 1: Power Grid – backbone for the energy system

M1 – Enhance grid use and sustainability
M2 – Onshore and offshore grid development and integration

CLUSTER 2: Digitalised power systems

M3 – Ensure secure and stable operation of the hybrid AC/DC grid
M4 – Enhance control and interoperability through digitalisation

CLUSTER 3: One-System of integrated systems

M5 – Enhance flexibility assessment and market mechanisms
M6 – Tools and strategies for optimal cross-sector integration

M4 – Enhance control and interoperability through digitalisation: enhance digitalisation for improved grid monitoring and control, ensuring interoperability. The main focus is the development of innovative tools for control centre operation.

Mission 4: Enhance control and interoperability through digitalisation

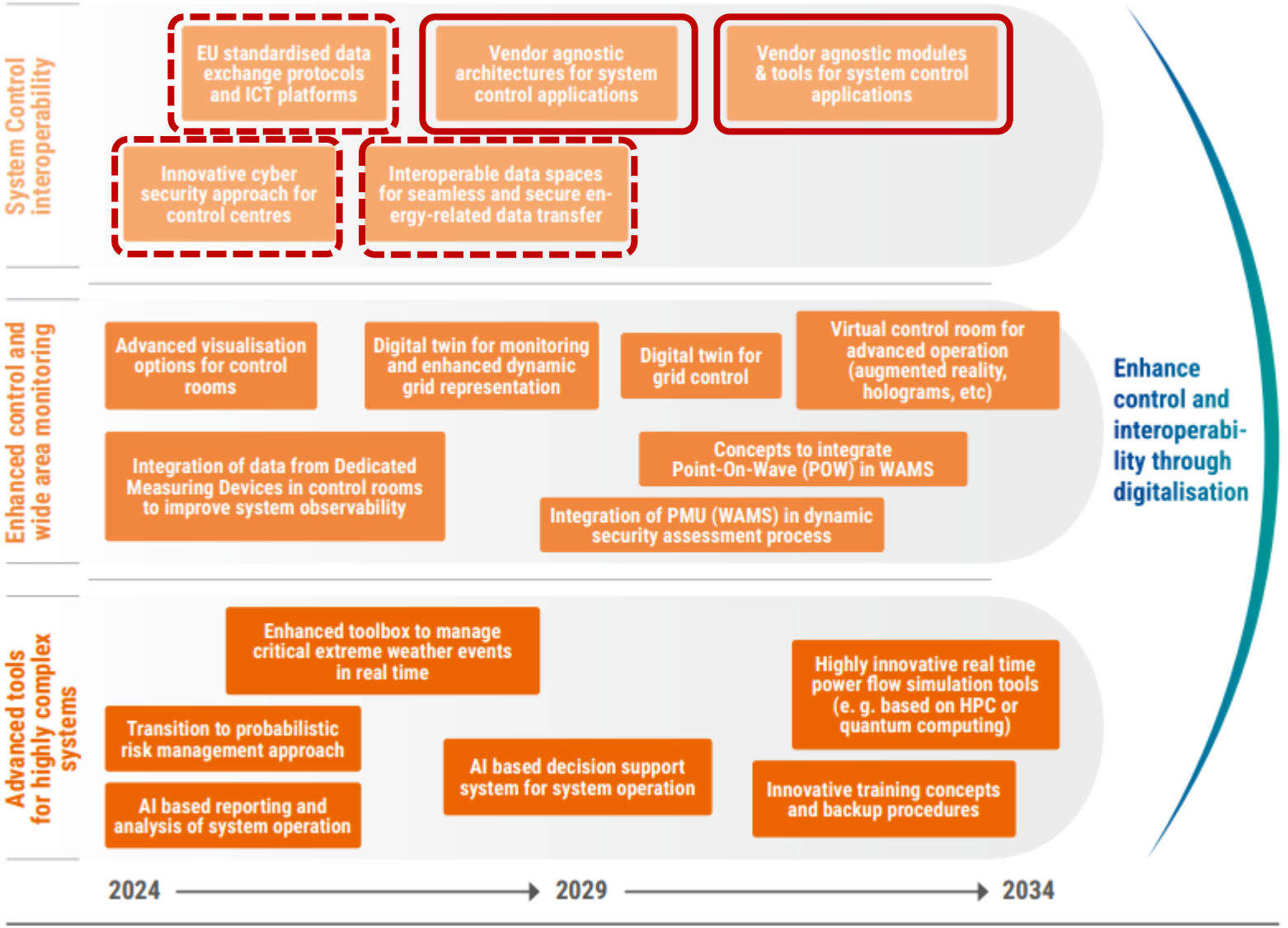


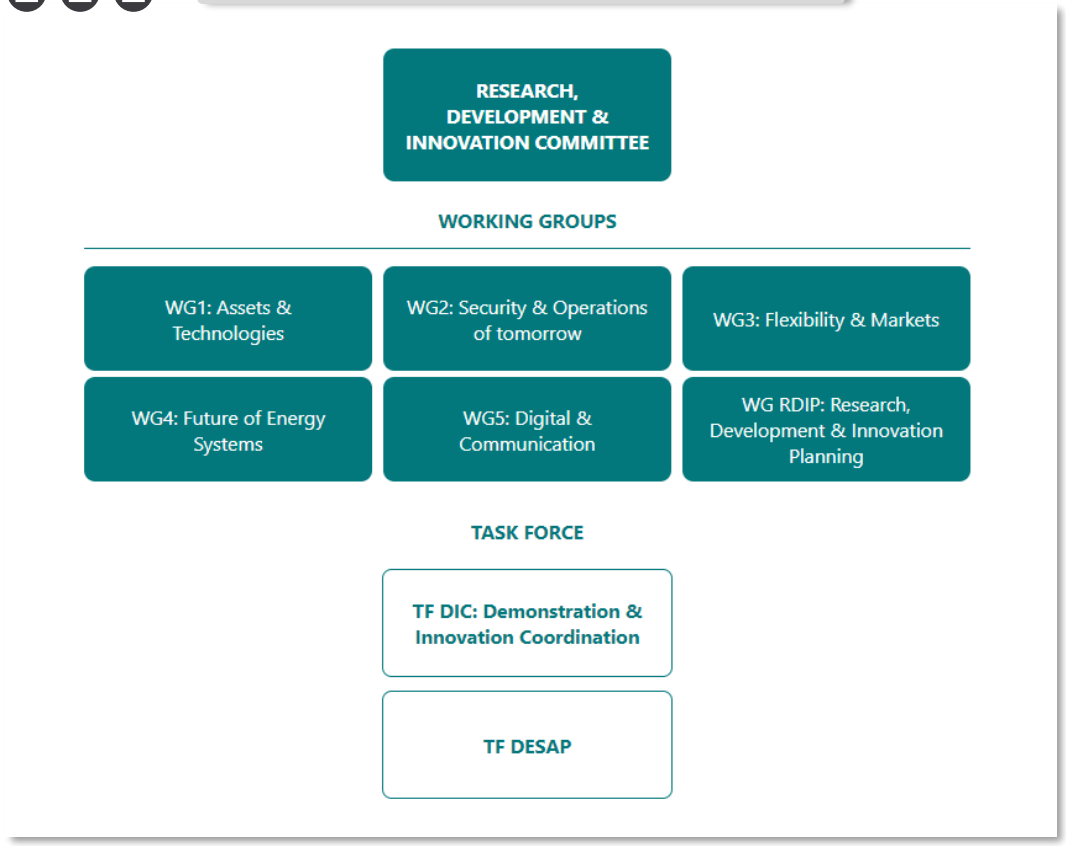
Figure 10: Mission 4 – Enhance control and interoperability through digitalisation

VAS as the enabler for interoperable systems

Welcome speech

Marco Forteleoni, TERNA
RDIC Vice Chair

Uroš Salobir, ELES
Marco Forteleoni, TERNA



Motivation towards vendor agnosticism

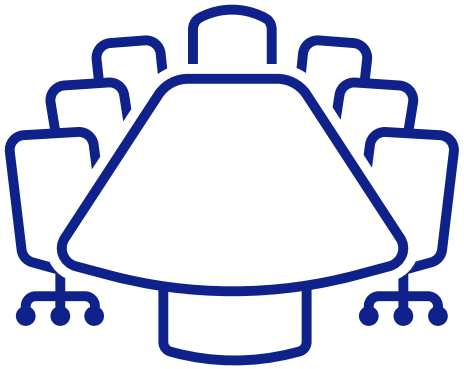
Ralf Heisig (TF VAS Leader)

TIME: 15 min

Who is the Task Force Vendor Agnostic Solutions (TF VAS)?

Speaker:
Ralf Heisig
50Hertz

Many TSO throughout Europe have joined their forces



TF VAS is a group of modern, forward-thinking TSOs, organised through ENTSO-E; in alignment with the European TSO community.

We identified the urgent need to move beyond existing tools, addressing their dependencies and missing functions.

What do we have in common?

Power systems becoming increasingly complex → Control Center Systems need to be more advanced along the entire process chain (early operation planning, real-time operation, and ex-post analysis).

TSO requirements

Vendor capabilities

Reasoning for the needs to change

Speaker:
Ralf Heisig
50Hertz

Justification for transition

Where do we come from?

- Projects with long lasting duration and therefore high risks, isolated data processing, complex and inflexible requirements.
- Implementations with high effort, high investment blocks, all handled as a “Blackbox System” with limited knowledge of internal processes, data and functionalities

What we need!

- Transparent, modular and interoperable System
- Lower risk and better costs effectiveness with a modular approach
- Clarity of software, processes and functions
- Flexibility in customization
- Scalability

Why now?

Intrinsic and external drivers:

- Highly dynamic energy sector requires faster and thorough systems adaptation
- Motivated by mandatory and evolving EU Regulations

TSOs have growing demands and fast developing requirements over the past years

Speaker:
Ralf Heisig
50Hertz

Through independent experiences, TSOs have come together to formulate a solution

Adaptability
Upgrades to new technologies proof challenging, the whole system needs to be updated.

Complex and Slow Changes
Too long update times, data can get lost

Vendor Lock-in
Features by providers are incompatible or need to be operated separately

Resilience
Legacy technology lacks state-of-the-art security requirements

Missing Features
Additional features take time to implement, if at all possible

Be part of our transition journey!

Vendor agnosticism

Speaker:
Ralf Heisig
50Hertz

We are part of the energy transition, and many other entities see the importance of vendor agnosticism

- Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 **on common rules for the internal market for electricity** and amending Directive 2012/27/EU
- Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 **on the internal market for electricity**
- Directive (EU) 2022/2557 of the European Parliament and of the Council of 14 December 2022 **on the resilience of critical entities**
- Regulation (EU) 2017/2195 of 23 November 2017 establishing a **guideline on electricity balancing**
- Regulation (EU) 2024/1747 of the European Parliament and of the Council of 13 June 2024 amending Regulations (EU) 2019/942 and (EU) 2019/943 as regards **improving the Union's electricity market design**
- ISO 50001: Energy Management Systems
- ISO 55001: Asset Management
- ISO/IEC 27001: Information Security Management Systems
- ISO 9001: Quality Management Systems
- IEC 61850: Substation Automation Standards
- NIS2 Directive (soon)
- DORA: Digital Operational Resilience Act
- EIRA: European Interoperability Reference Architecture
- ENTSO-E TSO-DSO Report: An Integrated Approach to Active System Management
- ICTC Knowledge Sharing on open-source solutions
- SOC KORRR: "Key Organisational Requirements, Roles and Responsibilities" related to data exchange in accordance with Article 40(6) of SO GL.

Common key aspects

- Interoperability
- Vendor-neutral approaches
- Standardisation
- Vendor-neutral security practices for critical infrastructure
- Services to facilitate interoperability and vendor neutrality
- Common European principles and criteria for data and information exchanges

Introduction to the Position Paper

Ralf Heisig (TF VAS Leader)

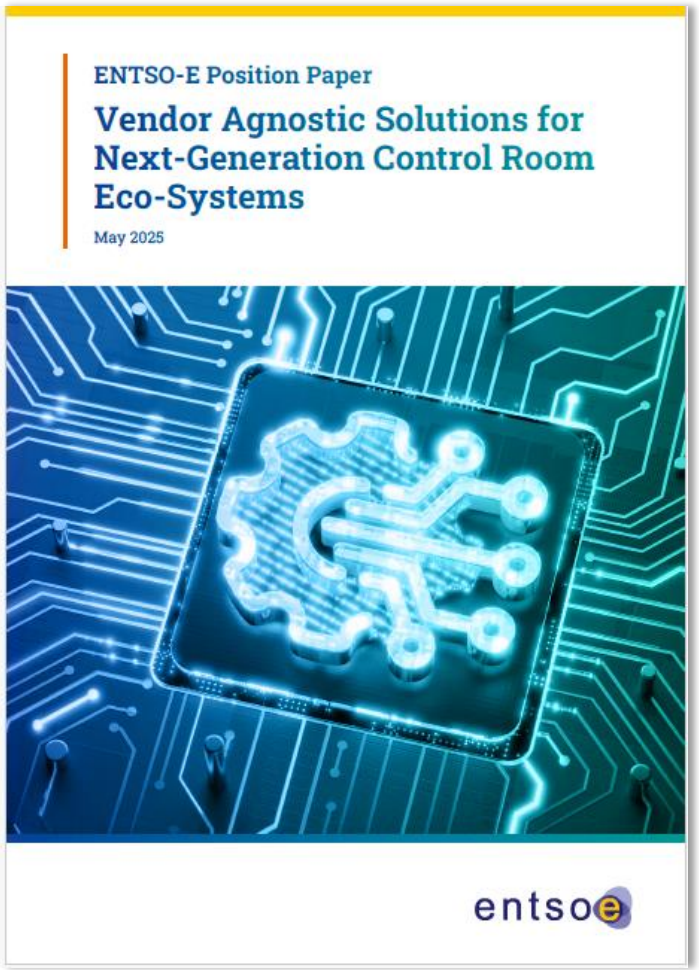
Anna-Gorczyca Goraj (RDIC WG5 Convener)

TIME: 10 min

Executive View: Vendor Agnostic Solutions (VAS) Position Paper

Speaker:
Ralf Heisig
50Hertz

The successful publication in May 2025 has achieved traction in the Community



- The position paper provides a high level **overview of the 7 fundamental tenets** that form the basis of a Next-Generation Control Room Eco-System.
- VAS aims to refine the **vision to create documents capable of assisting TSO tenders.**
- Additionally, VAS will attempt to unify the way in which TSOs **communicate on the topic through capabilities mapping** and common documentation such as modular contracts.

OR-Code to the VAS Position Paper

Key aspects of the VAS Position Paper

Speaker:
Ralf Heisig
50Hertz

The Position paper provides a holistic approach towards a future-ready control center system

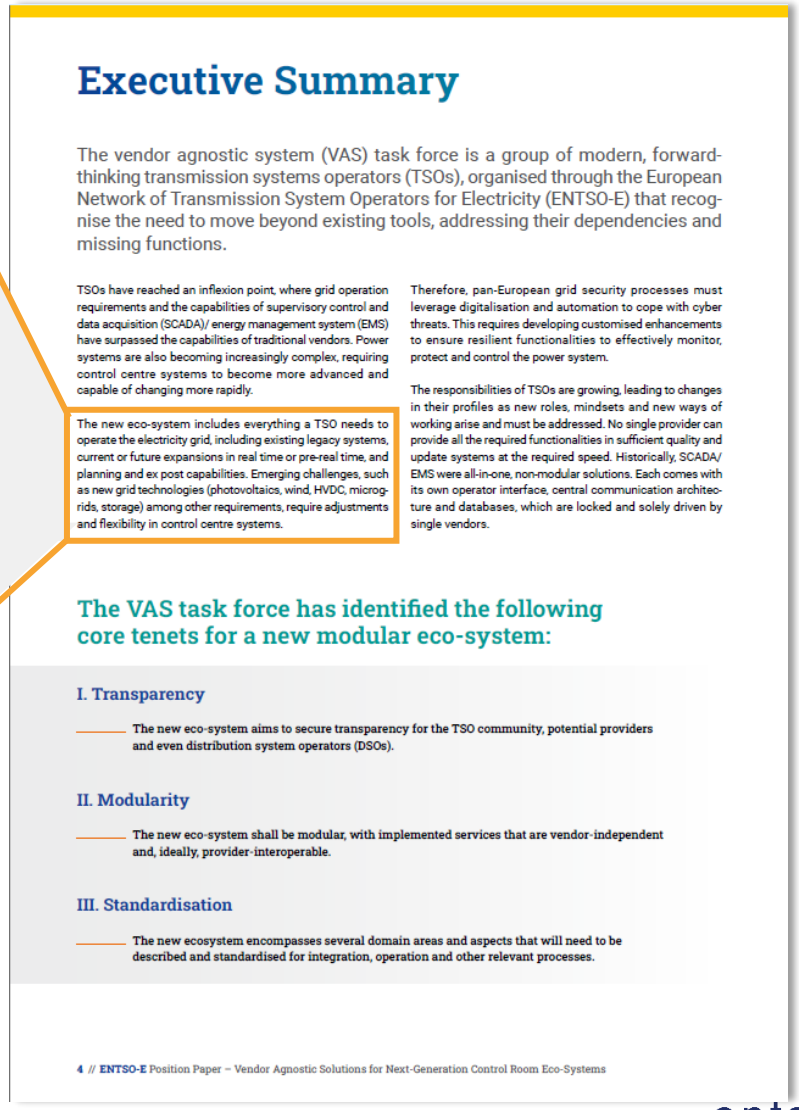
- The position paper contains requirements and ideas for a new control system that reduces or eliminates the existing challenges.
- Technical, architectural and organizational elements are discussed and explained in more detail.
- TF Vas has agreed on principles so-called tenets. In total seven tenets have been defined and provide a solid framework for next-generation control center systems.
- The TSO's shift towards openness, transparency, interoperability, and interchangeability, and its impact on boosting sustainability and resilience in this critical domain.
- It provides clear guidance on the essential aspects when designing and building future-ready control center systems.
- TF VAS emphasizes/represents a new mindset, new ways of working, and organizational change what makes it a holistic approach

Task force VAS defined how the “new eco-system" needs to look like

Speaker:
Ralf Heisig
50Hertz

In the Executive Summary a description is given

The new eco-system includes everything a TSO needs to operate the electricity grid, including existing legacy systems, current or future expansions in real time or pre-real time, and planning and ex post capabilities. Emerging challenges, such as new grid technologies (photovoltaics, wind, HVDC, microgrids, storage) among other requirements, require adjustments and flexibility in control centre systems.



Executive Summary

The vendor agnostic system (VAS) task force is a group of modern, forward-thinking transmission systems operators (TSOs), organised through the European Network of Transmission System Operators for Electricity (ENTSO-E) that recognise the need to move beyond existing tools, addressing their dependencies and missing functions.

TSOs have reached an inflexion point, where grid operation requirements and the capabilities of supervisory control and data acquisition (SCADA)/ energy management system (EMS) have surpassed the capabilities of traditional vendors. Power systems are also becoming increasingly complex, requiring control centre systems to become more advanced and capable of changing more rapidly.

The new eco-system includes everything a TSO needs to operate the electricity grid, including existing legacy systems, current or future expansions in real time or pre-real time, and planning and ex post capabilities. Emerging challenges, such as new grid technologies (photovoltaics, wind, HVDC, microgrids, storage) among other requirements, require adjustments and flexibility in control centre systems.

Therefore, pan-European grid security processes must leverage digitalisation and automation to cope with cyber threats. This requires developing customised enhancements to ensure resilient functionalities to effectively monitor, protect and control the power system.

The responsibilities of TSOs are growing, leading to changes in their profiles as new roles, mindsets and new ways of working arise and must be addressed. No single provider can provide all the required functionalities in sufficient quality and update systems at the required speed. Historically, SCADA/ EMS were all-in-one, non-modular solutions. Each comes with its own operator interface, central communication architecture and databases, which are locked and solely driven by single vendors.

The VAS task force has identified the following core tenets for a new modular eco-system:

I. Transparency

The new eco-system aims to secure transparency for the TSO community, potential providers and even distribution system operators (DSOs).

II. Modularity

The new eco-system shall be modular, with implemented services that are vendor-independent and, ideally, provider-interoperable.

III. Standardisation

The new ecosystem encompasses several domain areas and aspects that will need to be described and standardised for integration, operation and other relevant processes.

4 // ENTSO-E Position Paper – Vendor Agnostic Solutions for Next-Generation Control Room Eco-Systems

“eco-system” is the basis for all modules, coming from established and even 3rd party providers, being interconnected on harmonized and standardized interfaces.

RDIC WG5 TF VAS | Core Tenets

Speaker:
Anna Gorczyca-Goraj
PSE

Task force VAS has identified seven core tenets for a new modular eco-system

- I. Transparency
- II. Modularity
- III. Standardisation
- IV. Integration
- V. Digital and Cyber Resilience
- VI. Separation of Concerns
- VII. New ways of working

Speaker:
Anna Gorczyca-Goraj
PSE

Core tenets for the new modular eco-system

TF VAS experts:

Anna Gorczyca-Goraj (PSE)

Morten Smastuen (Statnett)

Carsten Strunge (ENDK)

Andreas Rudolph (TenneT)

Ralf Heisig (50 Hertz)

TIME: 60 min

Tenet I: Transparency

Speaker:
Anna Gorczyca-Goraj
PSE

The new eco-system aims to secure transparency for the TSO Community, potential providers or even DSOs

In software development transparency that all parties are involved in decision making processes regarding:

- software design
- architecture
- technologies used
- project structure
- feedback included in the software development and life cycle.

Over 100 definitions of transparency factors in the literature

Information transparency

Processes transparency

Within the TSO community additional layers need to be considered:

- European Commission Regulation (EU) 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission system operation
- ACER Methodology for coordinating operational security analysis in accordance with Article 75 of Commission Regulation (EU) 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission system operation
- Regulation (EU) No 5 43/2013 of 14 June 2013 on submission and publication of data in electricity markets

Tenet I: Transparency

Speaker:
Anna Gorczyca-Goraj
PSE

The new eco-system aims to secure transparency for the TSO Community, potential providers or even DSOs

Objective: To develop a framework for transparent cooperation among TSOs regarding solutions in the control centre eco-systems to support:

- Enhancement of data exchange via standardised interfaces
- Transparent sharing of information that will provide accessibility and usefulness regarding software requirements, design, documentation
- Cooperation of TSO's on design and deployment of new eco system architecture
- Facilitating new business models to share software and/or modules among TSOs.

Tenet II: Modularity

Speaker:
Morten Småstuen
Statnett

The new eco-system shall be modular and implemented services shall be vendor-independent and in best case provider interoperable

***Modularity* is a principle of system design describing the degree to which a system's components may be separated and recombined.**

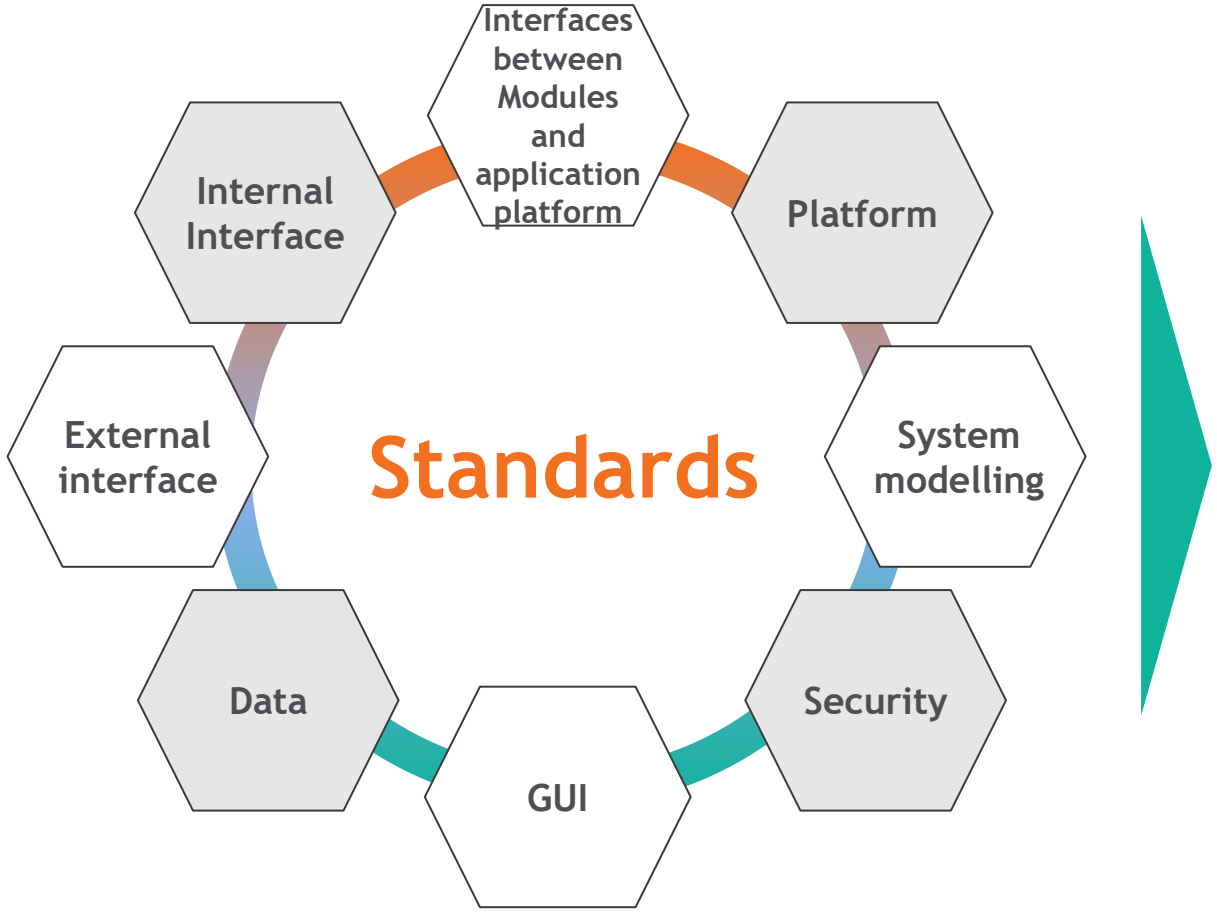
- *Modular architecture* refers to a system made of separate components (modules) that are connected together, but not dependent on each other.
- *Modularity* shall support control room eco system to:
  1. unlock the potential of increasing operational and non-operational data
  2. enable the use of event based and streaming technologies for design of new applications
  3. facilitate seamless information exchange via standardised interfaces
  4. enable flexibility with respect to maintainability and further functional improvement

Tenet III: Standardisation

Speaker:
Carsten Strunge,
Energinet

Module Interfaces as well as APIs to legacy systems or other connected systems shall be described and standardized to achieve full interoperability

Objective: Define specific domains for which standards are needed for an interoperable modular eco-system to work:



Based on international standards these eco-system standards need to be developed to achieve the interoperable modular system, where modules can be used across TSOs.

Standards Survey 2024, reflected in the tenets

Speaker:
Carsten Strunge,
Energinet

Goal

To enable a list of standards which many TSOs will be able to use, this survey was created to obtain the current Status Quo amongst European TSOs

Motivation

- For a modular system to have the greatest impact and benefit for all parties, the modules as well as the backbone should adhere to standards for communications & technologies.
- If many TSOs adhere to these standards when acquiring their own modular systems, modules can easily be implemented, traded and sold creating benefits for both the users and the providers of the modules.

Conclusion

- ➢ All TSOs use CIM information model standards to some degree.
- ➢ We need to explore standards for platform and control centre eco-systems.

Tenet IV: Integration

Speaker:
Carsten Strunge,
Energinet

The new eco-system must allow to be integrated with and/or connected to existing systems, notwithstanding potential upgrades and/or updates to the existing systems

- The migration to an eco-system approach includes the possibility that not all functions of the TSOs will be provided by newly developed modules.
- It is unlikely that TSOs will convert all their IT systems to new modules, the eco-system concept should include precisely the **interaction between new modular systems and existing systems.**
- **Seamless integration of new modules** with existing systems is therefore of great importance.
- New modules can be **developed directly in a flexible way with customizable interfaces** to other systems.
- This openness does not usually exist with existing systems. It is therefore necessary to evaluate what type of interfaces are required.

Well-developed integration capabilities, including to domain-specific legacy systems, are therefore crucial for the practical feasibility of a modular eco system.

Tenet IV: Integration

Speaker:
Carsten Strunge,
Energinet

The new eco-system shall be agnostic towards underlying infrastructure like private cloud, public cloud or on-premise as long as technology requirements are fulfilled and scalability is secured.

Infrastructure Agnosticism means usability on different platforms, in different environments or with different infrastructure components without needing major adjustments or changes.

A prerequisite for a modular eco-system is that the infrastructure be **cloud-native compliant**

Key properties of an infrastructure-agnostic eco-system include:

- **Flexibility**: Operation is not tied to a specific hardware, virtualisation platform or cloud provider.
- **Portability**: Applications or systems can be easily migrated from one infrastructure to another without major changes.
- **Scalability and future-proofing**: Companies can change, expand or update their infrastructure without redeveloping or adapting existing application functions

Tenet V: Digital & Cyber Resilience

Speaker:
Andreas Rudolph
TenneT

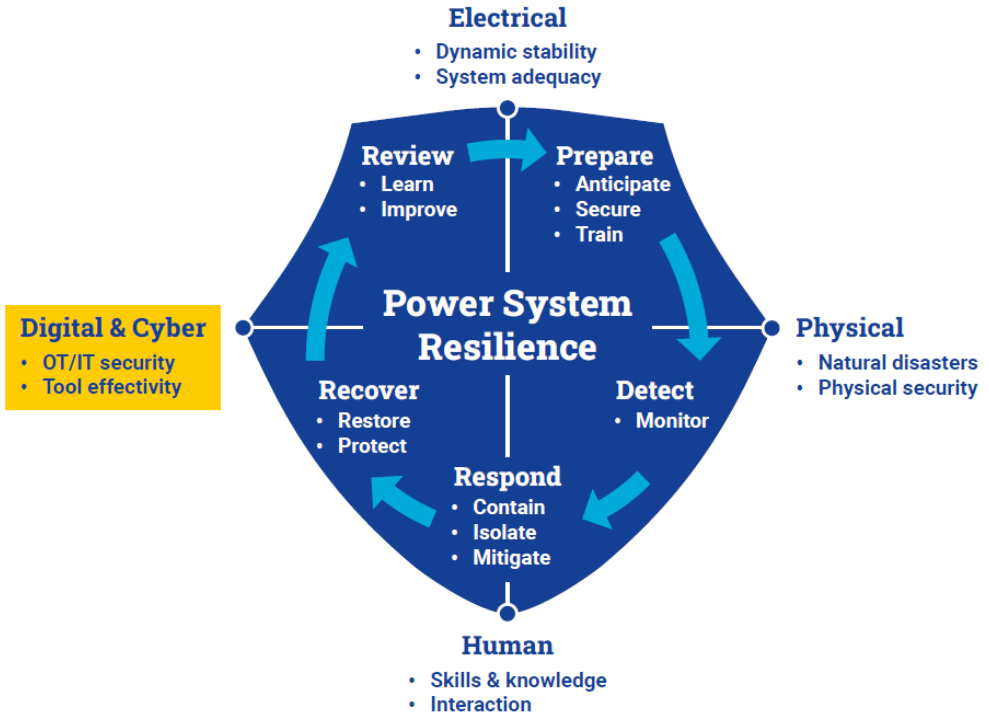
The new eco-system its modules and its operation shall be resilient by design, applying zero-trust principles.

Transmission system operators have clear resilience and security priorities when operating the power system:

1. Functional safety – first personnel safety, then minimizing damage on equipment
2. Security of supply as the primary goal for society
3. Fair competition across power markets

Hence the overall power system resilience is one of the key performance indicators.

Resilience is a multidimensional challenge



The VAS Position paper focuses on digital and cyber resilience perspectives

Tenet V: Digital & Cyber Resilience

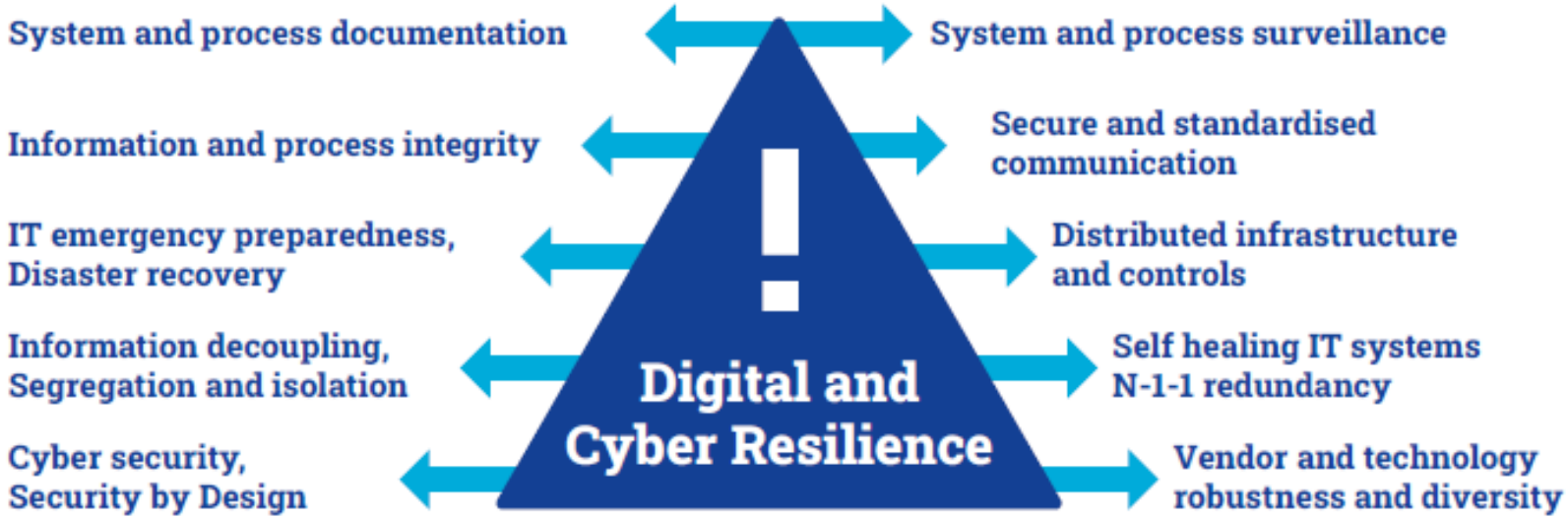
Speaker:
Andreas Rudolph
TenneT

The new eco-system its modules and its operation shall be resilient by design, applying zero-trust principles.

Digital and Cyber Resilience Capabilities and Principles

TSO Objective:
Maintain
a high degree of
digital and cyber
resilience
that matches
the resilience
expected for
the power system
we operate.

Key Principles



Key principles shall serve as our guideline for a future control room eco system

Tenet VI: Separation of Concerns

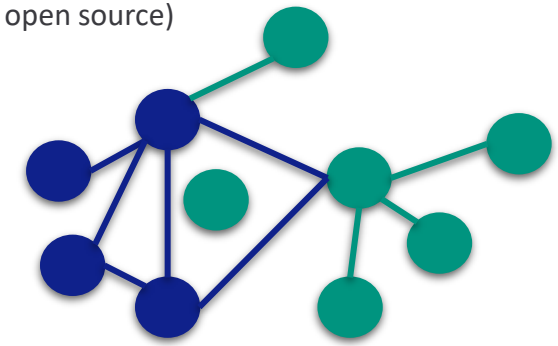
Speaker:
Ralf Heisig
50Hertz

Ambition and involvement Levels for TSOs

Three different but co-existing ambition levels as step-in option for TSOs following the new way

…filling the gaps and connecting the dots …

Re-use what already exist to leverage the usage and combining existing systems with low changing effort
New development filling functional gaps (commercial or open source)

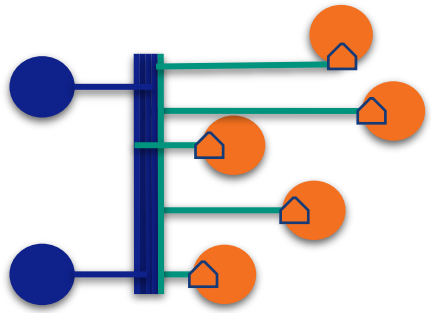


- things become more complex
- no cost savings
- High data maintenance

+ less ad-hoc invests
+ less risk in short term, not changing the as-is
+ less changes in existing software
+ fast results

…small effort following a direction towards the new…

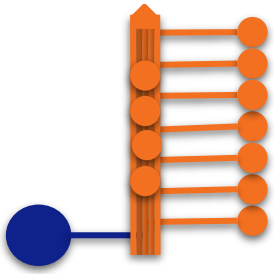
Integrate with/to legacy in an optimised way (interim solution during migration or even longer time frame)



- things become more complex
+ using pre-defined standards helps easier integration
- some invests in changes, but still multiple applications having same (redundant) functionality
+ small risk, due to changing partly the as-is

…build on standards, only what is needed per module, future oriented and cost reduced approach.

Genuine standardised developments with platform and modules



+ simplicity, smaller modules (core functions)
+ function re-used as platform module
+ using pre-defined standards
- Higher initial invests, for TSOs and providers
+ less costs in the long run
+ exchangeable modules

Consider: change mindset and project organization to be adapted for the better

Multi-vendor Legacy applications (monolithic)

Isolated new 3rd party or open-source application

Redundant functionality which is still there in each application

Modular feature for specific capability

Tenet VI: Separation of Concerns

Speaker:
Ralf Heisig
50Hertz

The new eco-system shall have ‘separation of concerns’ as a guiding principle of its architecture

The new ecosystem will consist of three layers:

1. Modules

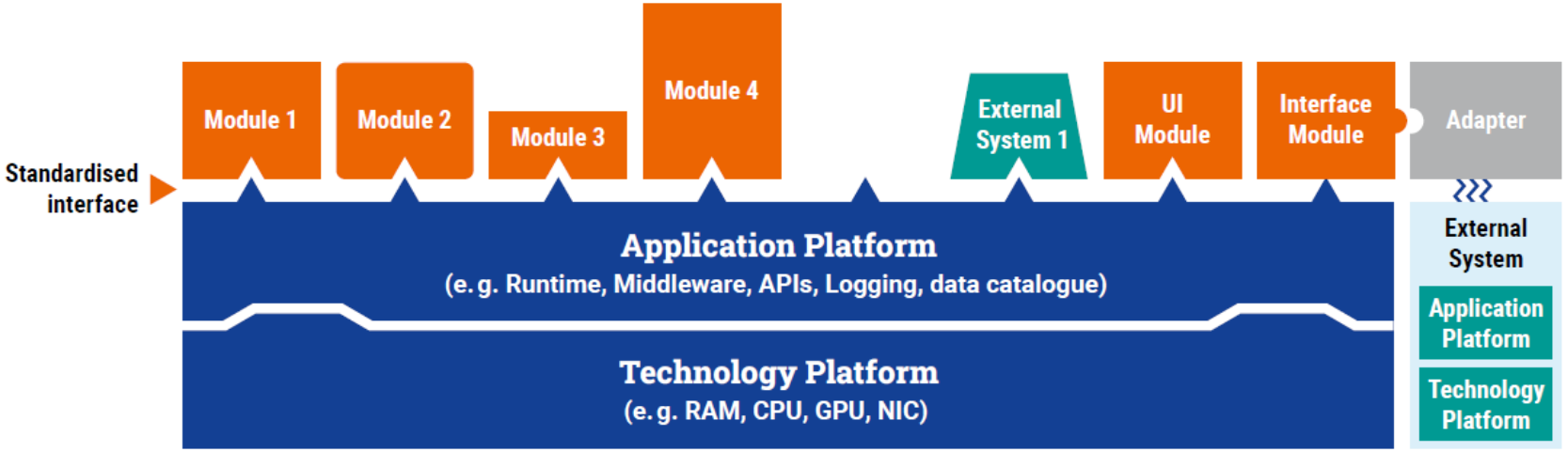
- Modules are the building blocks of a modular system. Each module encapsulates a specific functionality or a set of related functionalities.

2. Application Platform

- The Application Platform serves as the foundation upon which modules are deployed and interact.

3. Technology Platform

- The Technology Platform underpins the entire system, offering the core technologies and tools required to build and run the application platform and modules.

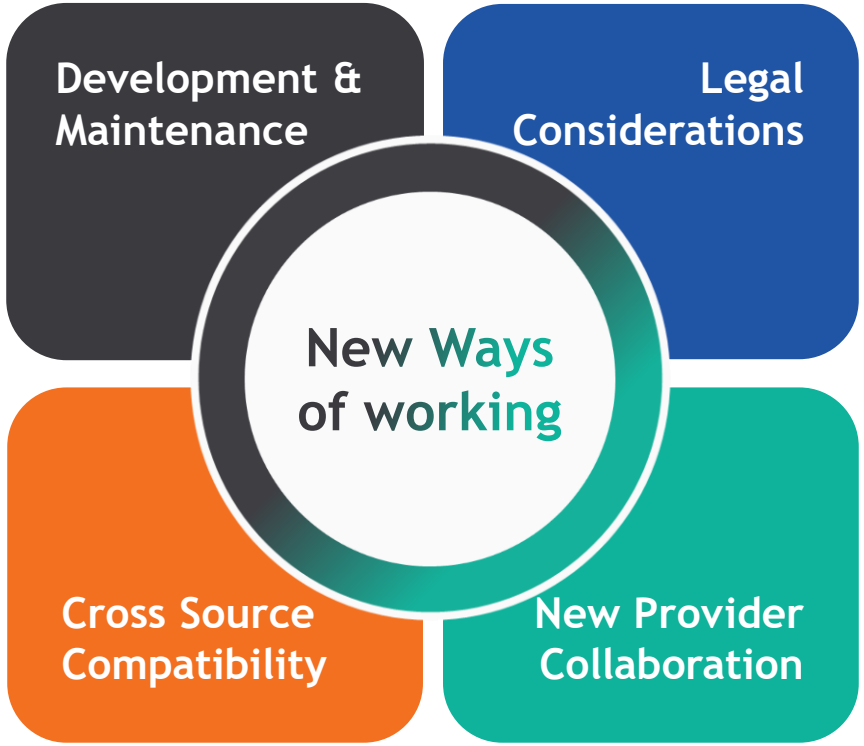


Tenet VII: New Ways of working

Speaker:
Andreas Rudolph
TenneT

- The new eco-system is not limited to software, it also includes development, operation and maintenance model

- The new eco-system can accommodate a combination of parts/modules with different software licencing models.



- The new eco-system will require a legal framework to enable the eco-system.

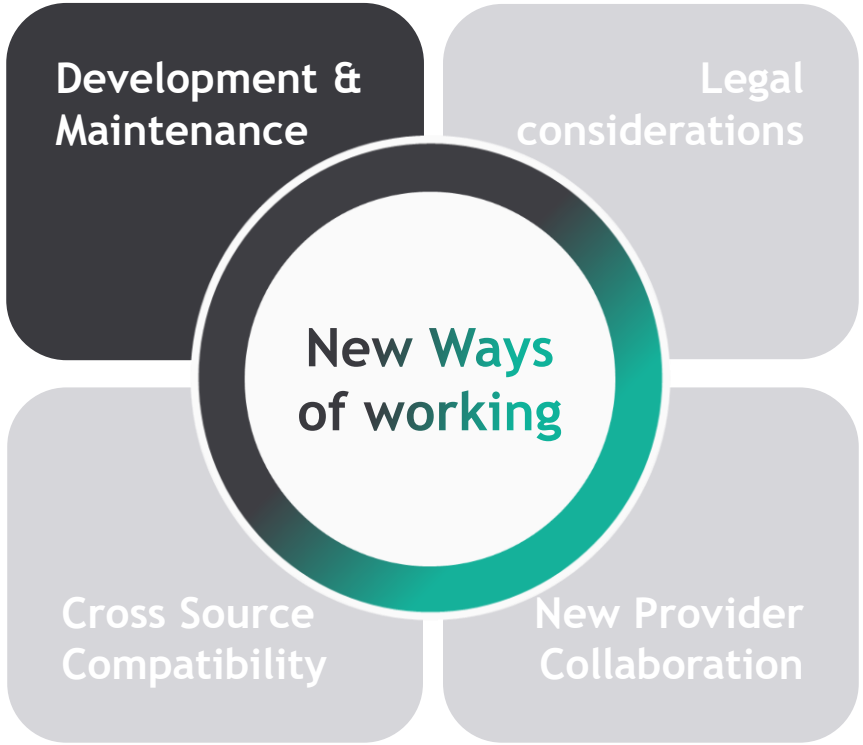
- The new eco-system will embrace a new collaboration with providers and facilitate new market models.

Tenet VII: New Ways of working

Speaker:
Andreas Rudolph
TenneT

All aspects - from development to operation and maintenance - are integrated and coordinated to guarantee a sustainable and effective IT infrastructure.

Key Aspects:
- Continuous Improvement
- Continuous Integration & Deployment
- 24/7 Maintenance

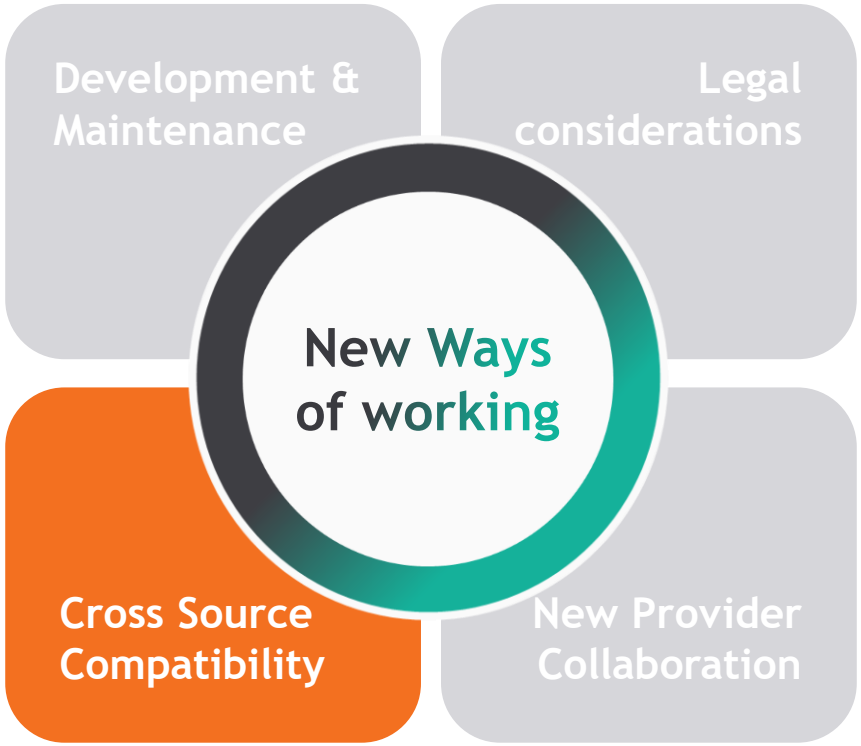


Tenet VII: New Ways of working

Speaker:
Andreas Rudolph
TenneT

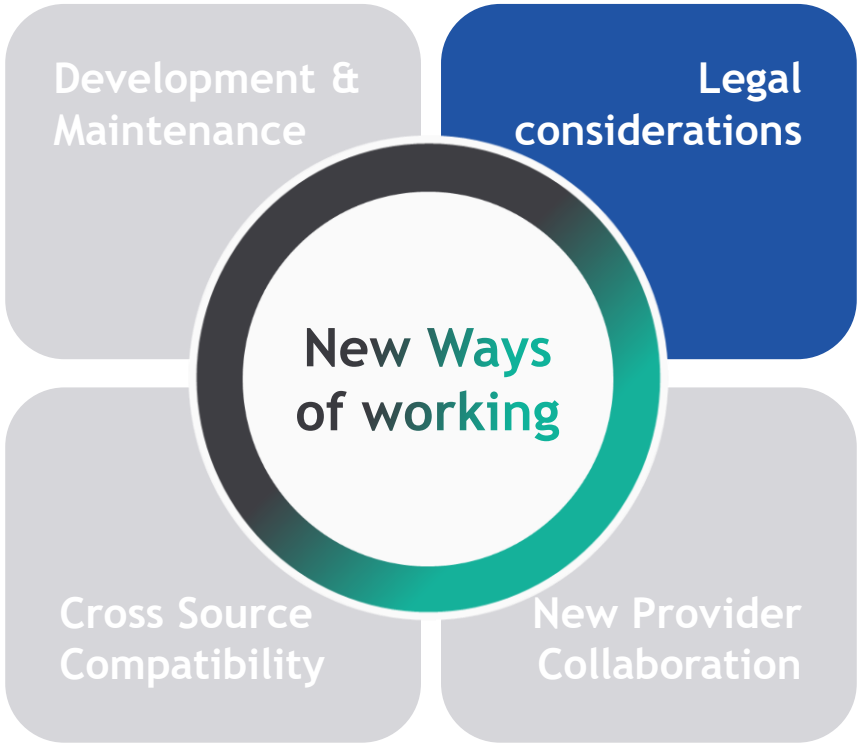
Strategically combining modules from different sources can create benefits

- Open Source Modules foster innovation
- Proprietary Modules offer high customization
- Comercial Modules offer quicker implementation



Tenet VII: New Ways of working

Speaker:
Andreas Rudolph
TenneT



Legal separation of concerns is of great importance!

- Treat legal, regulatory or compliance-related aspects separately.
- Promote a systematic, structured approach to integrate legal aspects into software development.

Tenet VII: New Ways of working

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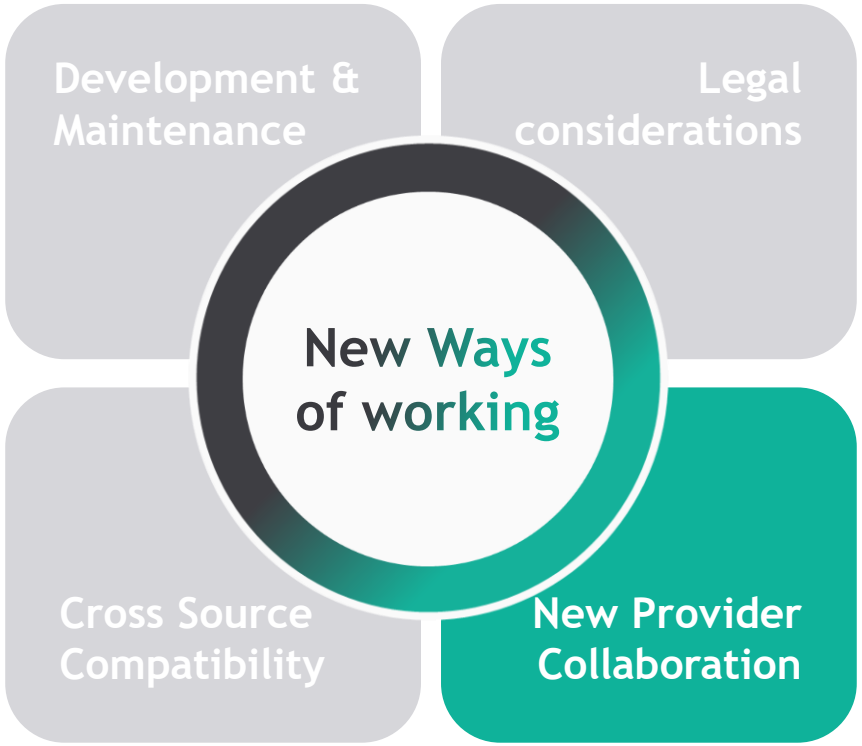

New relationship, roles & responsibilities need to be defined

New ownership and maintenance models can emerge

Each party can leverage its strengths and provides the best possible service

Opportunities & Challenges

Ralf Heisig (TF VAS Leader)

TIME: 15 min

Many new Opportunities arise for vendors and providers

Speaker:
Ralf Heisig
50Hertz

Standardized modular solutions enable to meet the requirements of the further-proof products

Shift to state-of-the-art technologies

- e.g. Software, virtualisations
- Application of current technologies which are modular by design

Deep Insight into TSOs'

- Tailoring for individual TSO instead of development one solutions brings individual needs to the forefront
- Multiple projects provide concentrated insights
- More harmonized TSO requirements, enabling low barrier to reuse modules

Market Access

- Smaller providers can enter the Market with highly specialised modules

Shorter product lifecycle

- Reuseable development expertise
- Lower cost of iterative development
- Easier updates and faster rollouts

Modular Products

- more regular projects with lower risk
- clearer requirements allow faster results
- easier to understand and less complex products
- Simplified and safe maintenance

Interoperability

- Standardized formats and interfaces
- Interoperable modules can be more easily repurposed for use with different customers
- Modular Contracts
- Liberalised data access across modules as opposed to data silos

The appendices will specify the tenets and will address potential concerns

Speaker:
Ralf Heisig
50Hertz

Appendices under development

Appendices of the Positions Paper will be developed to address the concerns

e.g.

- Digital and Cyber Resilience
- Catalogue of Standards
- License Models & Use Cases
- Stages of Transition

Appendices aim to develop specifications/standards to be usable in tenders and/or requirement documents

Closing remarks and invitation to submit feedback

Anna-Gorczyca Goraj (RDIC WG5 Convener)

TIME: 5 min

Next steps

Speaker:
Anna Gorczyca-Goraj
PSE

An invitation for collaboration

Send us your Feedback and Suggestions

E-Mail: rdi@entsoe.eu

Publication of FAQs

Q2/2025

Q3/2025

Q3/2025

Q4/2025

Position Paper Presentation

Individual Reponse

OR-Code to the VAS Position Paper

Thank you for your interest in the presentation

E-Mail us your suggestions: rdi@entsoe.eu

EXCELLENCE

We deliver to the highest standards. We provide an environment in which people can develop to their full potential.

TRUST

We trust each other, we are transparent and we empower people. We respect diversity.

INTEGRITY

We act in the interest of ENTSO-E

TEAM

We care about people. We work transversal and we support each other. We celebrate success.

FUTURE THINKING

We are a learning organisation. We explore new paths and solutions.

We are ENTSO-E

Our values define who we are, what we stand for and how we behave.
We all play a part in bringing them to life.